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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, QUANG N

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,921

Applicant(s)

HARVEY ET AL.

Examiner

Quang N. Nguyen

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detail Action

1. This Office Action is in response to the Amendment filed on 05/07/2004. Claims 1, 3-5, 12, 13, 15-17, 22, 24-28 and 30-32 have been amended. Claims 1-33 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,195,694), herein after referred as Chen, in view of Royal, Jr. et al. (US 6,571,201), herein after referred as Royal.**

4. As to claim 1, Chen teaches a method of automatically configuring a network device, comprising:

receiving a request from the network device to provide configuration information (*i.e.*, server 195 receiving a request from the browser 160 via the network interface 150 for the application files/configuration sets 175) (Chen, C8: L31-36);

retrieving a template (*i.e.*, HTML file 500 as illustrated in Fig. 5) describing a device configuration, wherein the template comprises one or more parameters that may receive values specific to a particular device (Chen, Fig. 5 and C9: L17-43);

retrieving one or more values of parameters specific to the device (Chen, C8: L46-67 and C9: L1-7);

creating and storing a device-specific instance of the configuration information based on the template and the values of parameters (*i.e.*, corresponding configuration set 175 containing customized HTML files 500 with embedded control programs 620 to conduct certain specific functions and control the specific subset 451 of peripheral devices 130 through their local APIs 440) (Chen, Fig. 5, C8: L1-13 and C9: L17-43).

However, Chen does not explicitly teach said configuration information conforming to an Extensible Markup Language Document Type Definition (XML DTD) and comprising one or more XML tags that delimit a beginning and an ending of the configuration information.

In the related art, Royal teaches a method of automatically configuring a fuel dispenser 110 (*i.e.*, a network device) via XML-based data exchanges with the remote system 130 and site controller 120, wherein the XML-formatted data comprises one or more “elements” delimited by a start tag, an end tag and intervening data (Royal, Fig. 2A, C4: L46-48 and C5: L35-44).

Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to combine the teachings of Chen and Royal to conform configuration information to an XML DTD comprising a beginning and an ending tag to delimit the configuration information because XML supports a richer set of document elements and applies better to various publishing media to allow a remote system to conveniently retrieve, monitor, or update/configure network devices using data items tagged in accordance with the defined grammar (Royal, C3: L17-27).

5. As to claims 2-3, Chen-Royal teaches the method of claim 1, further comprising the steps of:

testing the configuration information to determine whether it is well-formed with respect to the XML DTD (*i.e., stored data retrieved is converted into XML-formatted data using an XML processor*);

providing the configuration information to the network device over a reliable transport protocol (*i.e., XML files maybe transferred between the fuel dispenser 110 and the remote system 130 using several known techniques such as HTTP for URL named request response files transfers or FTP*), wherein the network device ensures that all of the configuration information is received by checking the one or more XML tags that delimit a beginning and an ending of configuration information (*a start tag and an end tag delimiting intervening data for example, passing the "addresses" structure to extract individual "address" entries simply entails parsing the overall data set based on the start and end tags*) (Royal, C4: L47-67, C5: L1-5, C7: L1-20 and C8: L7-40).

6. As to claims 9-11, Chen-Royal teaches the method of claim 1, comprising the step of receiving an HTTP request that identifies an Active Server Page (*ActiveX technology*) or Java Servlet (*the embedded programs can be implemented using Java script, and/or a Java applet and/or any other embedded program which uses plug-ins*) of a configuration service (*server 195 and/or proxy server 195A*) that can provide configuration information and that includes a unique identifier of the network device (*HTTP request contains two IP addresses, one the identifier of the network device requesting, and the other the identifier of the server providing configuration information, i.e., source and destination IP addresses*) (Chen, C9: L33-35 and C19: L62-67).

7. Claims 4-5, 8 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen-Royal and further in view of Malik et al. (5,832,503), herein after referred as Malik.

8. As to claims 4-5, Chen-Royal teaches the method of claim 1, further comprising the steps of:

providing the configuration (*configuration set 175*) to the network device;

at the network device, applying the configuration to the network device (*i.e., executing configuration file 500 line by line to invoke APIs to configure the device*) (Chen, C8: L1-13 and L31-54).

However, Chen-Royal does not explicitly teach first, at the network device, syntax checking the configuration information to determine whether configuration commands therein conform to a command language that is understood by the network device and when a syntax error is detected during the syntax checking step, publishing an event that reports the syntax error using an event service.

"Official Notice" is taken that both the concepts and advantages of checking and ensuring program code is syntactically correct before executing the code are well known and expected in the art.

In the related art, Malik teaches generating alarms to an event log to indicate whether or not configuration was successful (Malik, C2: L33-36 and C9: L48-61).

Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to combine the teachings of Chen-Royal and Malik to include syntax checking at the network device and publishing an event that reports the syntax error using an event service since such methods were conventionally employed in the art to avoid the execution of code that is not syntactically correct that can provide results, which are unpredictable and detrimental, and to allow user to view the results of the configuration and make the decisions based on the provided results.

9. As to claim 8, Chen-Royal-Malik teaches the method of claim 1, further comprising the steps of:

applying the configuration to the network device (*i.e., executing configuration file 500 line by line to invoke APIs to configure the device*) (Chen, C8: L1-13 and L31-54);

receiving a user request to cancel application of the configuration information (*i.e., user actions can change which application files 175, files 500 are executed and/or whether or not some of the application files are executed*) (Chen, C8: L50-54).

restoring the network device to its state prior to application of the configuration information (*i.e., a "safe load" option helps to control the load process, if the load fails, the configuration manager tries to restore, i.e., roll back the original configuration to the model*) (Malik, C9: L1-6).

10. As to claims 12-13, Chen-Royal-Malik teaches the method of claim 1, further comprising the additional steps of:

retrieving a reference to a template describing the configuration information from a directory service (*Malik teaches selecting a template from a database of a configuration server, hence, it is inherent that a reference to the location of templates such as memory address, database location, etc., was received*); and

retrieving a container object associated with the network device from the directory and obtaining the values of parameters from directory objects contained within the container object (*Malik also teaches retrieving a model type, i.e., a container object, associated with the network device that contains attribute values, i.e., values of parameters, used to configure the device*) (Malik, Fig. 5, C2: L14-30 and C7: L24-32).

11. As to claim 14, Chen-Royal-Malik teaches the method of claim 5, wherein the step of syntax checking comprises parsing one or more configuration commands within the configuration information using a parser of an operating system that is executed by the network device (*XML tags included within the XML-formatted data allow either the fuel dispenser 110, i.e., the network device, or the remote system 130 to easily parse the received data using an XML processor 206 for subsequent processing or use*) (Royal, C6: L52-58 and C8: L44-50).

12. Claims 6-7 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen-Royal-Malik and further in view of Suarez (5,790,789).

13. As to claims 6-7, Chen-Royal-Malik teaches the method of claims 1 and 5, but does not explicitly teach the additional step of generating an event to an event service to which the plurality of network devices subscribe, wherein the event announces that the configuration commands conform to a correct syntax.

In the related art, Suarez teaches that event services can be used to provide the ability to create, update, publish and subscribe to global or system defined events by constantly monitoring environments and reacting accordingly to allow agents, services and users to define reactions to certain events (Suarez, C21: L35-50).

Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to combine the teachings of Chen-Royal-Malik and

Suarez to generate an event to an event service announcing that the configuration commands conform to correct syntax since such methods were conventionally employed in the art to allow the testing of one device before applying the configuration to many to make sure that only one device has the chance of entering an error state instead of the entire network if the configuration commands are faulty.

14. As to claims 15-16, Chen-Royal-Malik-Suarez teaches the method of claim 1, further comprising the additional steps of:

determining that a partial configuration should be sent to one or more network devices (*determining what attributes of a model type are of interest for configuring the device, i.e., partial configuration*) (Malik, Fig. 6 and C7: L8-15);

publishing the partial configuration trigger event to an event service (Suarez, C21: L35-50); and

providing the partial configuration to one or more network devices (Malik, C2: L18-26).

15. Claims 17-31 recite limitations similar to the limitations of claims 1-16; therefore, they are rejected under the same rationale.

16. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarriel et al. (US 6,553,403), herein after referred as Jarriel, in view of Malik et al. (5,832,503), herein after referred as Malik.

17. As to claim 32, Jarriel teaches a method of using software agents deployable within the network to perform or to facilitate a particular administration, configuration or other management task, comprising:

receiving a request for network topology information from the computer program application (*i.e., the distributed monitor 50 configured to receive and service HTTP GET requests such as a DM topology request or a request for a status*) (Jarriel, C7: L58-65);

providing the resolved network topology information to a configuration agent within the application that is configured to re-configure the computer program application to operate with the resolved network topology (*i.e., the HTTP interface 52f of the distributed monitor 50 is responsible for turning the requested topology/data into HTML and returning it to the calling browser/software agent 37 deployable within the network to perform/facilitate a particular administration, configuration or other management tasks*) (Jarriel, C6: L38-50 and C7: L58-65).

However, Jarriel does not explicitly teach retrieving a template of network topology information from a repository and resolving elements of the topology into application-specific values, resulting in creating and storing resolved topology information.

In the related art, Malik teaches selecting/retrieving a template, associated with the network device and then using the template as an index to retrieve attribute values (*i.e., application-specific values*), used to configure the network device (Malik, Fig. 5, C2: L14-30 and C7: L24-32).

Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to combine the teachings of Jarriel and Malik to include a template that can be filled with application-specific values for configuration management in communication networks because templates provide a level of object-oriented topology to the network, wherein a set of network devices can be associated with one single model type, thus simplifying configuration (Malik, C2: L36-50).

18. As to claim 33, Jarriel-Malik teaches the method of claim 32, but does not explicitly teach application-specific syntax checking of elements of the template.

"Official Notice" is taken that both the concepts and advantages of checking and ensuring program code is syntactically correct before executing the code are well known and expected in the art.

Therefore, it would have been obvious to one having ordinary skills in the art at the time the invention was made to modify the teachings of Jarriel and Malik to include syntax checking since such methods were conventionally employed in the art to avoid the execution of code that is not syntactically correct that can provide results which are unpredictable and detrimental.

19. Applicant's arguments as well as request for reconsideration filed on 05/07/2004 have been fully considered but they are moot in view of the new ground(s) of rejection.

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

21. Further references of interest are cited on Form PTO-892, which is an attachment to this office action.

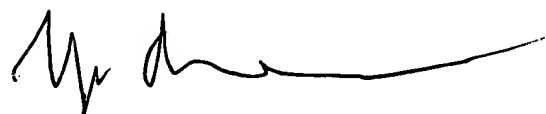
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22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (703) 305-8190.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (703) 305-4003. The fax phone number for the organization is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Quang N. Nguyen

A handwritten signature in black ink, appearing to read 'Rupal Dharia', with a long horizontal flourish extending to the right.

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER